

Title (en)

INDIRECT EVAPORATIVE COOLING AIR CONDITIONER

Title (de)

KLIMAANLAGE MIT INDIREKTER VERDUNSTUNGSKÜHLUNG

Title (fr)

CLIMATISEUR DE REFROIDISSEMENT PAR ÉVAPORATION INDIRECTE

Publication

**EP 4098952 A1 20221207 (EN)**

Application

**EP 22166039 A 20220331**

Priority

CN 202121217207 U 20210601

Abstract (en)

An indirect evaporative cooling air conditioner is provided according to the present application, which includes a housing, multiple partition plates located in the housing and at least two heat exchangers arranged side by side, the multiple partition plates and the at least two heat exchangers separate the housing into multiple indoor air flow passages and multiple outdoor air flow passages, each heat exchange has a first heat exchange flow passage and a second heat exchange flow passage which are crosswise and independently arranged, the multiple indoor air flow passages are in communication with the first heat exchange flow passages to form an indoor circulation passage, the multiple outdoor air flow passages are in communication with the second heat exchange flow passages to form an outdoor circulation passage, and the fluid in the multiple indoor circulation passages exchange heat with the fluid in the multiple outdoor circulation passages through the at least two heat exchangers. Since at least two heat exchangers arranged side by side are provided in the air conditioner in this solution, under a same core body volume, a windward heat exchange area of the first or second heat exchange flow passage in the heat exchanger can be increased, an air flow resistance is reduced, heat exchange efficiency is increased, and an energy efficiency ratio of the air conditioner is improved.

IPC 8 full level

**F24F 5/00** (2006.01); **F24F 13/20** (2006.01); **F24F 13/30** (2006.01); **F28D 5/00** (2006.01); **F28D 1/02** (2006.01); **F28D 1/04** (2006.01); **F28D 5/02** (2006.01); **F28D 9/00** (2006.01); **F28D 21/00** (2006.01)

CPC (source: EP US)

**F24F 5/0035** (2013.01 - EP US); **F24F 6/14** (2013.01 - US); **F24F 13/20** (2013.01 - US); **F24F 13/30** (2013.01 - EP US); **F28D 5/00** (2013.01 - EP); **F28D 1/0426** (2013.01 - EP); **F28D 5/02** (2013.01 - EP); **F28D 9/00** (2013.01 - EP); **F28D 21/0014** (2013.01 - EP); **F28D 2001/0266** (2013.01 - EP); **F28F 2250/106** (2013.01 - EP)

Citation (search report)

- [X] US 2019124796 A1 20190425 - LIN ZHIYONG [US]
- [A] US 2007101746 A1 20070510 - SCHLOM LESLIE A [US], et al
- [A] WO 2016055759 A1 20160414 - AIREDALE INTERNAT AIR CONDITIONING LTD [GB]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**EP 4098952 A1 20221207**; **EP 4098952 B1 20240327**; **EP 4098952 C0 20240327**; CN 215523568 U 20220114; US 12013147 B2 20240618; US 2022381455 A1 20221201

DOCDB simple family (application)

**EP 22166039 A 20220331**; CN 202121217207 U 20210601; US 202217827981 A 20220530